CLAIMS

1   1.   A method for providing authored content, from device-independent content
2   generated by a content author, to any of a plurality of requesting user network
3   terminal devices, each requesting user network terminal device having means for
4   delivering at least a portion of the authored content received, the presentation of
5   authored content so delivered being dependent on feature values of the requesting
6   network terminal device, said method comprising the steps of:

7   associating one or more of the device feature values with a requesting user
8   network terminal device in response to said requesting user network
9   terminal device transmitting a request for the authored content; and

10   converting the device-independent content into a device-specific content
11   adapted to said requesting user network terminal device,

12   such that said device-specific content provides for a display on said requesting user
13   network terminal device in a format as intended by the content author.

1   2.   The method of claim 1 further comprising the step of specifying a feature-
2   value set for the plurality of user network terminal devices, said feature-value set
3   including a set of selected device features with one or more discrete feature values
4   assigned to each said selected device feature, each said selected device feature
5   selected from the features of the plurality of user network terminal devices in
6   accordance with a pre-established criterion.

1   3.   The method of claim 2 wherein said set of selected device features comprises
2   a member of the group consisting of display size, aspect ratio, display line count,
3   color capability, graphics capability, variable size text capability, different font
4   capability, input capability, and input bandwidth.

1   4.   The method of claim 2 wherein said pre-established criterion includes a

2   determination that a particular said selected device feature affects the manner in

3   which the authored content is presented.

1   5.   The method of claim 2 wherein said feature value set comprises discrete

2   values assigned to selected features of a generic network terminal device.

1   6.   The method of claim 5 wherein said generic network terminal device

2   comprises a set of device features selected from the display features of the plurality of

3   user network terminal devices.

1   7.   The method of claim 1 further comprising the step of annotating the authored

2   content with markup information to provide the device-independent content, said

3   markup information specifying intent of the content author for one or more

4   corresponding device feature values;.

1   8.   The method of claim 7 wherein said step of converting the device-independent

2   content comprises the step of invoking said markup information corresponding to the

3   device feature values associated with said requesting user network terminal device.

1   9.   The method of claim 7 wherein said step of converting the device-independent

2   content comprises the step of removing said markup information from said device-

3   independent content.

1   10.   The method of claim 7 wherein said step of annotating the authored content

2   comprises the steps of:

3   identifying that content in said authored content which requires author

4   annotation; and

5   embedding meta-data into said content requiring author annotation, said meta-

6   data based on the feature values.

1   11.   The method of claim 1 wherein said requesting user network terminal device

2   comprises a member of the group consisting of a wireless telephone and a personal

3   digital assistant.

1   12.   The method of claim 1 further comprising the step of identifying said

2   requesting user network terminal device prior to said step of associating one or more

3   of the device feature display values.

1   13.   The method of claim 12 wherein said step of identifying said requesting user

2   network terminal device comprises the step of reading network terminal device

3   information contained in said request.

1   14.   The method of claim 1 wherein said step of converting the device independent

2   content comprises the steps of:

3   determining the array of display pixels available in said requesting user network

4   terminal device from the feature values;

5   comparing said array of display pixels with an array of image pixels

6   corresponding to an authored content image;

7   selecting said authored content image for display in said requesting user

8   network terminal device if said array of image pixels does not exceed said

9   array of display pixels; and

10   suppressing said authored content image from display if said array of image

11   pixels does exceed said array of display pixels.

1   15.   The method of claim 1 wherein said step of converting the device independent

2   content comprises the steps of:

3   determining an aspect ratio for said requesting user network terminal device

4   from the feature values;

5   sending authored content marked with an attribute of square to said requesting

6   user network terminal device if said aspect ratio is square;

7   sending authored content marked with an attribute of portrait to said requesting

8   user network terminal device if said aspect ratio is portrait; and

9   sending authored content marked with an attribute of landscape to said

10   requesting user network terminal device if said aspect ratio is landscape.

1   16.   The method of claim 1 wherein said step of converting the device independent

2   content comprises the steps of:

3   determining that said authored content is marked as having a uni-axis free form

4   characteristic;

5   identifying the number of segments supported by the display in said requesting

6   user network terminal device;

7   concatenating a number of rows for sending to said requesting user network

8   terminal device if said uni-axis free form characteristic includes a list

9   characteristic, wherein said number of rows corresponds to said number

10   of segments supported; and

11   concatenating a number of columns for sending to said requesting user network

12   terminal device if said uni-axis free form characteristic includes a column

13   characteristic, wherein said number of columns corresponds to said

14   number of segments supported.

1   17.   The method of claim 1 wherein said step of converting the device independent

2   content comprises the steps of:

3   determining that said authored content is marked as having a bi-axially free

4   form characteristic;

5   identifying the character count supported by a display in said requesting user

6   network terminal device;

7   sending to said requesting user network terminal device a segment of authored

8   content, wherein the character count in said segment corresponds to said

9   character count supported by said display.

1   18.   A communication system for providing authored content to any of a plurality

2   of requesting user network terminal devices, each requesting user network terminal

3   device having means for delivering at least a portion of the authored content received,

4   the presentation of authored content so delivered being dependent on features of the

5   requesting user network terminal device, said communication system comprising:

6   a network terminal device detector for receiving a display request from

7   the requesting user network terminal device and providing

8   therefrom identification of the requesting user network terminal

9   device;

10   an origin server for receiving said display request and, in response thereto,

11   providing device-independent content corresponding to said display

12   request;

13   a transformer for associating one or more user network terminal device

14   feature values with said requesting user network terminal device in

15   response to receiving said user network terminal device

16   identification from said terminal device detector, for receiving said

17   device-independent content from said origin server, and for

18   transforming said device-independent content into device-specific

19   content formatted for the requesting user network terminal device.

1   19.   The communication system of claim 18 wherein said device-independent

2 content comprises markup information providing information for displaying said

3 authored content in compliance with author intent.

1   20.   The communication system of claim 18 further comprising a device profile

2 repository accessible by said network terminal device detector, said device profile

3 repository including a feature-value set for the requesting user network terminal

4 device, said feature-value set including a set of selected user network terminal device

5 features with one or more discrete device feature values assigned to each said selected

6 user network terminal device feature.

1   21.   The communication system of claim 18 further comprising a content

2 repository accessible by said origin server, said content repository for storing

3 annotated authored content generated by the content author whereby said origin server

4 provides device-independent content from said annotated authored content.

1   22.   The communication system of claim 18 wherein each said selected user

2   network terminal device feature is selected from the features of the plurality of

3   requesting user network terminal devices in accordance with a pre-established

4   criterion.

1   23.   The communication system of claim 18 wherein said set of selected device

2   features comprises a member of the group consisting of display size, aspect ratio,

3   display line count, color capability, graphics capability, variable size text capability,

4   different font capability, and input capability.

1   24.   The communication system of claim 18 wherein said requesting user network

2   terminal device comprises a member of the group consisting of a wireless telephone

3   and a personal digital assistant.

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2   25.   A method of presenting content to a terminal device having particular display

3   characteristics, said method comprising the steps of:

4   receiving a request for content from the terminal device;

5   based on said request, identifying display characteristics associated with

6   the terminal device;

7   converting the content into a device-dependent format compatible with

8   said identified display characteristics; and

9   transmitting said device-dependent formatted content to the terminal

10   device.

1   26.   The method of claim 25 wherein said step of converting comprises the step of

2   converting the content by interpreting metatags embedded in the content.

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1 27. The method of claim 25 wherein said step of converting comprises the step of

2 converting the content into a landscape-formatted display format if the terminal

3 device has a landscape-formatted display, and converting the content into a portrait-

4 formatted display format if the terminal device has a portrait-formatted display.

1 28. The method of claim 25 wherein said step of converting comprises the step of

2 converting the content into a first aspect ratio if the terminal device has said first

3 aspect ratio, and converting the content into a second aspect ratio of the terminal

4 device has said second aspect ratio.

1 29. The method of claim 25 wherein said step of converting comprises the step of

2 converting the content into a small-sized image if the terminal device accommodates

3 only small-sized images, and converting the content into a large-sized image if the

4 terminal device accommodates large-sized images.

1 30. The method of claim 25 further comprising the step of annotating the content

2 with meta-data to indicate the manner in which portions of the content should be

3 represented on a plurality of different terminal devices, the terminal devices having

4 mutually incompatible display characteristics.

1 31. The method of claim 25 wherein said step of converting comprises the step of

2 performing a best-fit match between said display characteristics and one of a plurality

3 of display formats.